

REMARKS

By this Amendment, claim 2 is amended and claims 17-22 are added. Accordingly, claims 1-22 are pending. Reconsideration of the present application is respectfully requested.

I. The Claims Define Allowable Subject Matter

The Office Action rejects claims 1-11 and 13-16 under 35 U.S.C. §102(b) over U.S. Patent No. 5,245,646 to Jackson et al. ("Jackson"), and claim 12 under 35 U.S.C. §103(a) over Jackson. These rejections are respectfully traversed.

A. Claims 1 and 5

Jackson does not disclose a method including "determining a measure of the frequency response and receiving a nominal frequency response," as recited in independent claim 1, or a circuit including "a control device which is adapted to select a stored adjustment parameter depending on said determined measure of the frequency response and on a nominal frequency response fed to the circuit arrangement and to adjust the at least one adjustable capacitor on the basis of the selected adjustment parameter," as recited in independent claim 5.

Instead, Jackson describes a tuning circuit for a filter wherein switchable capacitors are used to adjust the frequency response of a continuous time filter which may vary according to process variations of resistors in capacitors as found in col. 2, lines 59-64 and col. 5, lines 44-53. Therefore, the circuit arrangement disclosed by Jackson is used for a filter which has a single predetermined nominal frequency response to adapt the actual filter response to this single nominal response, to compensate, for example, for process variations of the components of the circuit.

In addition, the present invention, as described in paragraphs [004] and [027], relates to a filter arrangement where the nominal frequency response may be selected externally.

Additionally, the actual frequency response is measured as found in paragraph [025]. Therefore,

in the present invention the adjustable capacitor is adjusted on the basis of 1) a measure of the (actual) frequency response and b) an externally selected nominal frequency response which is selected from a plurality of given frequency responses, whereas in the applied reference the capacitors are switched only on the basis of actual frequency response of the filter, whereas the nominal frequency response is fixed and not adjustable.

During our telephone interview with the Examiner on February 8, 2005, he asserted that the decoder 34 of Jackson may be implemented as a programmable logic device meaning that this decoder includes receiving an external input. Applicants respectfully assert that this application of the applied reference to achieve the claimed features of the present invention can only be accomplished through impermissible hindsight. In most cases, programmable logic devices like programmable logic arrays (PLA) are programmed with a special programming device when manufacturing the electronic device in which the PLA is to be incorporated. Thereafter, the programming of the PLA is fixed for the lifetime of the electronic device, and reprogramming may be effected only by taking the PLA out of the electronic device and reprogramming it with the help of the special programming device. Some programmable logic devices are not even reprogrammable at all, the programming being done by irreversible changes in the device.

Only in special cases, corresponding programming circuitry (which, as a matter of course, leads to additional costs) is incorporated in the electronic device itself so that the programmable logic device may be reprogrammed during use.

Since, in the entire disclosure of Jackson, only one given nominal frequency response is discussed. The cheaper and thus logical way to realize the arrangement disclosed by Jackson would be to use a preprogrammed logic device as described above, the programming of which

may not be changed easily during use unless taking the programmable logic device out of the arrangement.

In particular, since there is no hint in the applied reference that it may be desirable to modify the nominal frequency response during use, it would not make sense to a person skilled in the art to include additional programming circuitry in the arrangement.

Accordingly, only when knowing the present invention which discloses the idea of being able to modify the nominal frequency response during use, such a measure would make sense. Consequently, the rejection is based on impermissible hindsight.

B. Claims 15 and 16

As recited in claims 15 and 16, the nominal frequency response is selected from a plurality of given nominal frequency responses, i.e., from a predetermined set of frequency responses. This feature is described, for example, in paragraph [027] of the as-filed specification, wherein as an example six different nominal filter frequencies are given. Even if a nominal frequency response may be supplied to the programmable logic device of Jackson, this still does not mean that there is a given set of nominal frequencies to choose from.

C. Claims 17 and 20

The features previously presented in the claims of the Amendment dated February 14, 2005 are now added as dependent claims 17 and 20. Specifically, new claims 17 and 20 recite a fixed capacitor arranged in parallel with the adjustable capacitor. The applied reference does not teach or suggest this feature.

As previously asserted, Jackson discloses “[e]ach of the capacitors 80-84 has a second electrode connected to a first terminal of a respective one of a plurality of switches 90-94. In other words, the second electrode capacitor 80 is connected to the first terminal of switch 90, and

so forth for capacitors 81-84 and switches 91-94.” Col. 5, lns. 10-15. In addition, “[e]ach of switches 90-94 has a control terminal for respectively receiving control signals B0-B4 from decoder 34.” Col. 5, lns. 17-19. Thus, Jackson relies on switches to control and modify the component value of the analog filter. *See* Col. 2, lns. 59-62.

In contrast, the present invention uses a fixed capacitor arranged in parallel with an adjustable capacitor. With this arrangement, the number of switchable capacitors can be reduced or eliminated. The arrangement in the present invention is very advantageous because the device and method is simplified by transmitting the information about the nominal filter frequency and about the ascertained time constant to the control device and connecting it to various lines in an address input which is several bits wide. In this way, no complex logic is required and an ordinary read-only memory can be used for the memory device. Since such memories are generally available only with a particular number of memory cells, memory cells are sometimes unused if the number of combinations comprising the number of nominal filter frequencies and the possible time constants is smaller than the number of memory cells. *See* page 10, paragraph [028]. Furthermore, contact resistance of added switches may impair the operation of the filter when using a circuit for determining the measure of the frequency response. *See* page 3, paragraph [007].

D. Claims 4, 9, 18, 19, 21 and 22

New claims 18, 19, 21 and 22 further delineate the features of claims 4 and 9. In the rejection of claims 4 and 9, the Office Action relies on the truth table illustrated in Fig. 2 of Jackson showing five inputs and five outputs. According to claim 4 and claim 9, however, the input, i.e. the address, has a word length comprising at least two digits, wherein at least one digit in the address word length is filled with a digital value derived from the determined measure of

the frequency response and at least one digit in the address word length is filled with a digital value which describes the nominal frequency response. This means that the address comprises two separate parts, one used for inputting the desired nominal frequency response and one for inputting the actual frequency response. In contrast thereto, according to Jackson, a counter value determined according to equation (2) is fed to the truth table of Fig. 2 of Jackson (see in particular col. 4, lines 20-30 of Jackson). Therefore, Jackson does not disclose using an address which comprises two different parts.

For further distinguishing this feature from the applied reference, claims 18 and 21 recite the digital value describing the nominal frequency response is indicative of a selected nominal frequency response taking from a set of at least two nominal frequency responses. These claims are based on paragraph [027] of the as-filed application where six possible nominal frequencies are given as an example, and paragraph [028] where it is stated that the nominal cut-off frequency is transmitted in the form of a binary digital value.

Finally, new claims 19 and 22 specify the range of the frequency response which may be taken from paragraph [004] of the as-filed application, which also is not disclosed in the applied reference.

Accordingly, Applicants respectfully assert that the rejections under 35 U.S.C. §§102 and 103 should be withdrawn because the applied reference does not teach or suggest each feature of independent claims 1 and 5.

For at least these reasons, it is respectfully submitted that independent claims 1 and 5 are patentable over the applied reference. The remainder of the claims that depend from independent claims 1 and 5 are likewise patentable over the applied reference for at least the reasons discussed above, as well as for the additional features they recite.

As pointed on in MPEP §2131, “[t]o anticipate a claim, the reference must teach every element of the claim.” Thus, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987).” Similarly, MPEP §2143.03 instructs that “[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 409 F.2d 981, 180 USPQ 580 (CCPA 1974).”

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-22 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact undersigned representative at the telephone number below.

Any fees incident to this Amendment may be charged to Deposit Account No. 08-2665.

DATED this 11th day of May, 2005.

Respectfully submitted,



Jeffery M. Lillywhite
Registration No. 53,220
Holme Roberts & Owen LLP
Customer No. 34013
299 South Main, Suite 1800
Salt Lake City, UT 84111
(801) 521-5800